Foundations of Algebra

Module 2: Arithmetic to Algebra

Materials List

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| Lesson | Materials |
| 1. Arithmetic to Algebra | NA |
| 1. Olympic Cola Display | * Act 1 picture -Olympic Cola Display * Pictorial representations of the display * Student recording sheet |
| 1. Distributing Using Area | * Student activity sheet * Optional: Colored Sheets of paper cut into rectangles. These can be used to introduce the concepts found in this lesson and to create models of the rectangles as needed. |
| 1. Triangles and Quadrilaterals | * Student handout for [www.visualpatterns.org](http://www.visualpatterns.org) activator * Cut out triangles and quadrilaterals on template * Envelopes * Student activity sheet * Match up cards for closing activity * Template for Like Terms closing activity |
| 1. Tiling Lesson | * patty paper units for tiling * (Teacher) 3 unit × 2 unit rectangle * (Students) 5 large mystery rectangles lettered A–E (1 of each size per group) * Student activity sheet |
| 1. Conjectures about Properties | * Student activity sheet * Optional: manipulatives to show grouping (put 12 counters into groups of zero) |
| 1. Quick Check I | * Student sheet |
| 1. Visual Patterns | * Various manipulatives such as two color counters * Color tiles * Connecting cubes * Visual Patterns Handout |
| 1. Translating Math | * Sticky notes may be offered as a way to build tape diagrams (bar models) |
| 1. Exploring Expressions | * Optional: Personal white boards (or sheet protectors) * Student lesson pages * Marbles and a bag (if using the differentiation activity) |
| 1. A Few Folds | * Student activity sheet for each student/pair of students/or small group * Paper for folding activity in Part 1 |
| 1. Bacterial Growth | * Student activity sheet |
| 1. Excursions with Exponents | * Student handout/note taking guide |
| 1. Squares, Area, Cubes, Volume, Roots…Connected? | * One box of Cheez-Its per team (algebra tiles or other squares may be substituted) * One box of sugar cubes per team (average 200 cubes per one pound box) (algebra cubes, linking cubes, or other cubes may be substituted) * Graphic Organizer for Squares * Graphic Organizer for Cubes * 2 Large number lines (using bulletin board paper) to display in the class; one for square roots and one for cube roots |
| 1. Quick Check II | * Student sheet |
| 1. What’s the “Hype” about Pythagoras? | * Student handout * Calculators * Sticky notes * Link or download version of Robert Kaplinksy’s “How Can We Correct the Scarecrow?” video [***http://robertkaplinsky.com/work/wizard-of-oz***](http://robertkaplinsky.com/work/wizard-of-oz) |
| 1. Fabulous Formulas | * Formula sheet * Application problems * Calculators |
| 1. The Algebra of Magic | * Computer and projector or students with personal technology (optional) * Directions for mathematical magic tricks * Counters * Sticky notes or blank pieces of paper-all the same size |